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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,742	01/23/2001	Ewald A. Terpetschnig	LJL 32901	3871

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EXAMINER

LAM, ANN Y

ART UNIT PAPER NUMBER

1641

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/768,742

Applicant(s)

TERPETSCHNIG ET AL.

Examiner

Ann Y. Lam

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-30,33-41 and 83-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-30,33-41 and 83-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 34 is objected to because of the following informalities: line 2, before the comma, --the kit—should be inserted. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 28-30, 33-41 and 83-89 are rejected under 35 U.S.C. 102(e) as being anticipated by Kopf-Sill et al., 6,524,790.

As to claim 83 (and 28-30, 33-41, 83-85 and 87-89), Kopf-Sill discloses a kit comprising a probe (i.e., label, col. 28, line 38) bound to a member (i.e., first reactant, col. 30, line 31), where the member is a compound (col. 30, lines 37-46) that specifically binds to an analyte (i.e., second reactant, col. 30, line 32), or is a substrate (see column 30, line 36) for the analyte (e.g., enzyme, see column 30, line 36); and a particulate mass label (i.e. bead, col. 34, lines 54 and 61) capable of specifically binding to the

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member, the complex formed by binding of the member to the analyte, or the product of the action of the analyte on the member; wherein a measurable property of the probe is sensitive to the size of the complex formed by binding of the mass label, probe, and the member, member-analyte complex, or member product (see column 32, line 47 – column 33, line 6, and column 34, lines 11-26.)

As to claims 84 and 85, the particulate mass label is a glass bead (see column 34, line 61.)

As to claim 87, the analyte is an enzyme, and the probe is bound to a member that is a substrate for the enzyme (see column 32, line 51.)

As to claim 88, the measurable property of the probe is different for the probe bound to the enzyme substrate than for the complex of the probe, the member product and the mass label (see column 32, line 64 – column 33, line 6, and column 34, lines 11-26.)

As to claim 89, the measurable property may be measured using fluorescence polarization (see column 28, lines 1-6.)

As to claim 28, the probe is photoluminescent (see column 28, lines 1-6.)

As to claim 29, the probe is capable of having a photoluminescence lifetime that is greater than the rotational correlation time of the unbound probe and less than the rotational correlation time of the complex formed by binding of the probe, member or member product, and mass label (see column 28, lines 1-6, and lines 29-37.)

As to claim 30, the probe binds to the member noncovalently (e.g. antibody-antigen binding, see column 30, lines 36-41.)

As to claim 33, the mass label (bead, column 34, lines 52-55) is capable of specifically binding to more than one member.

As to claim 34, the mass label being a first mass label, the kit further comprising a second mass label (i.e., the second label, col. 28, line 38) capable of specifically binding to at least one of the member, the complex formed by binding of the probe to the member, the member product, and the first mass label, but not the probe alone (see column 28, lines 38-44, and lines 52-55.)

As to claim 35, the second mass label is capable of specifically binding to at least two first mass labels, so that the second mass label may form crosslinks between members (see column 28, lines 38-47, lines 52-55 and lines 62-63.)

As to claim 36, the second mass label includes at least an immunological binding partner (see column 28, line 47.)

As to claim 37, the probe is not normally present in the sample (see column 28, lines 7-8.)

As to claim 38, the mass label is not normally present in the sample (col. 34, lines 54 and 61).)

As to claim 39, the property of the probe is related to a rotational diffusion coefficient of the probe (see column 28, lines 1-6, and lines 29-37.)

As to claim 40, the property may be measured using a technique selected from the group consisting of polarization, light scattering, and magnetic resonance (see column 29, lines 9-28, and column 32, line 64 – column 33, line 6.)

As to claim 41, the property of the probe is related to the translational diffusion coefficient of the probe (see column 29, lines 9-28, and column 32, line 64 – column 33, line 6.)

As to claim 86, Kopf-Sill discloses a kit comprising a probe (i.e. bead, col. 34, lines 54 and 61) (or alternatively, the second label, col. 28, line 38) bound to a member (i.e. first reactant, col. 30, line 31), where the member is a compound (see col. 30, line 38-46) that specifically binds to an analyte (i.e., second reactant, col. 30, line 32), or is a substrate (see column 30, line 36) for the analyte (e.g., enzyme, see column 30, line 36); and a particulate mass label (i.e., the first label, col. 28, line 38) capable of specifically binding to the member, the complex formed by binding of the member to the analyte, or the product of the action of the analyte on the member; wherein a measurable property of the probe is sensitive to the size of the complex formed by binding of the mass label, probe, and the member, member-analyte complex, or member product (see column 32, line 47 – column 33, line 6, and column 34, lines 11-26), wherein the particulate mass label is a colloidal metal or a nanocrystal (see column 28, line 5.)

Response to Arguments

Applicant's arguments filed March 14, 2005 have been fully considered but they are not persuasive.

Applicant argues on page 8 that the Kopf-Sill labels are not disclosed as useful as mass labels, that is, having sufficient mass to be capable of altering a measurable

property of a probe by virtue of associating with the probe. Applicant also argues that Kopf-Sill does not include any teaching that these particles be used as mass labels, but teaches rather that they are useful labels for direction detection. Applicant also argues on page 10 that the Kopf-Sill 'probes' fail to exhibit a property that is sensitive to the size of the resulting complex.

In response, Examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). In this case, Applicant is claiming a product not a method of use, and Kopf-Sill discloses the structures that are capable of performing the intended use.

Applicant also argues on page 11 that under Examiner's interpretation of the colloidal metal, bead or nanocrystal is the claimed mass label, Kopf-Sill fails to disclose any complexes that are or could be labeled simultaneously with both a colloidal metal, bead, or nanocrystal as well as a fluorescent dye, nor is there any suggestion to label a complex in this way. In response, Examiner notes that Applicant has not recited any claims that requires this combination of limitations.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mirkin et al., 6,361,944, also appears to disclose the claimed invention by disclosing a nanoparticle-oligonucleotide complex with a fluorescent label, the complex also binding to one or more complementary oligonucleotide-nanoparticles to increase the size of the mass to facilitate detection.

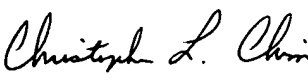
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Y. Lam whose telephone number is 571-272-0822. The examiner can normally be reached on M-Sat 11-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.L.




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